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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/919,592	08/05/97	PULVIRENTI	F S1022/7923

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B5M1/0127

EXAMINER

KIM, J

ART UNIT	PAPER NUMBER
2504	

DATE MAILED: 01/27/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/919,592

Applicant(s)
Pulvirenti et al.

Examiner
Jung Kim

Group Art Unit
2504



☒ Responsive to communication(s) filed on Aug 5, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-4, 6-11, 13, 14, 16-22, 24, and 25 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 1-4, 6-11, 13, 14, and 16-22 is/are allowed.

☒ Claim(s) 24 and 25 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Part III DETAILED ACTION

In view of the arguments and the amendments made to claims 1-4,6-11,13,14 and 16-22 by applicant's response filed on 8-5-97, the prior rejection of the fore-mentioned claims over Okada and Matsumura references has been withdrawn.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 24 is rejected under 35 U.S.C. § 102(b) as being anticipated by Matsumura. With respect to claim 24, Matsumura discloses on Fig. 4 a circuit comprising:

oscillator(44 on Fig. 3 and 17-22 on Fig. 4) powered by a continuous power voltage(ground voltage at the source of 20 in Fig. 4) generating first and second periodic signals at nodes R1,S1 on Fig. 4, which periodic signals are applied to first and second charge transfer condensers 11-12; and a bridge 13-16 of four controlled switches 13-16 having two intermediate terminals which are the gate terminals of 15-16 connected to the charge transfer capacitors 11-12. The inherent capacitance of the substrate would have worked as a charge accumulation capacitor, as called for in claim 24. For instance, when voltage at Q1 is low, the inverter 15,13 provides a high voltage(ground) at P1. With respect to claims 2 and 9, the MOS transistors 13-16 are

connected in such a way as to create a one-way conduction path in which currents flow only in one direction from the ground supply to Vbb.

3. Claim 24 is rejected under 35 U.S.C. § 102(b) as anticipated by Okada. With respect to claims 6 and 13-14, Okada discloses on Fig. 2A a circuit comprising:

oscillator(21-27 on Fig. 5) powered by a continuous power voltage(ground voltage with 0 v on Fig. 3A) having first and second periodic signals at nodes Q1,Q2 on Fig. 2A, which signals are applied to first and second charge transfer capacitors C1-C2; and a bridge T1-T2,TD1-TD2 of four controlled switches having two intermediate terminals which are the gate terminals of T1-T2 connected to the charge transfer capacitors C1-C2. The inherent capacitance of the substrate would have worked as a charge accumulation capacitor, as called for in claim 24.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 25 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsumura.

With respect to claim 25, it is notoriously well known in the art that a multiple stages of charge pumps can be used in series in order to obtain different output magnitudes. For example, Asaro teaches in the unit 3 of Fig. 3 that the number of charge pump stages, each stage being formed of a transistor and a diode, can be varied in order to vary the magnitude of the output of the charge

pump. Therefore, it would have been obvious to a person of ordinary skills in the art at the time of invention to use a multiple stages of charge pump of Matsumura for the well known purpose of varying the magnitude of the charge pumped output, as called for in claim 25.

6. Claim 25 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Okada. With respect to claim 25, it is notoriously well known in the art that a multiple stages of charge pumps can be used in series in order to obtain different output magnitudes. For example, Asaro teaches in the unit 3 of Fig. 3 that the number of charge pump stages, each stage being formed of a transistor and a diode, can be varied in order to vary the magnitude of the output of the charge pump. Therefore, it would have been obvious to a person of ordinary skills in the art at the time of invention to use a multiple stages of charge pump of Okada for the well known purpose of varying the magnitude of the charge pumped output, as called for in claim 25.

Response to Arguments

With respect to rejection of claims 24-25, Applicant argues that both Matsumura and Okada fail to show four controlled switches because diode connected transistors 13-14 of Matsumura and TD1-TD2 of Okada are not switches. However, it is noted that diodes are two way switches that turn on when voltage across it is one way and turn off otherwise. Therefore, the dioded connected transistors of Matsumura and Okada are controlled switches, to thereby anticipate the claims 24-25.

With respect to claim 25, applicant argues that nether Matsumura or Okada teaches or suggest plural bridge circuits. It is noted, however, that the corresponding rejections are

combination rejections. The grounds of rejection were not that either Matsumura or Okada alone discloses all of the claimed limitations, but that the combinations of Matsumura and Okada with other prior art, as described in the corresponding rejections, discloses all of the claimed limitations, as claimed. One cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore, applicant's response does not overcome the corresponding rejections.

Allowable Subject Matter

Claims 1-4,6-11,13-14 and 16-22 are allowed for the reason that prior art fails to show that the bridge circuit comprises two CMOS inverters.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Kim whose telephone number is (703)305-7242. The examiner can normally be reached on Monday through Friday from 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (703) 308-4876. The fax phone number for this Group is (703) 308-7722.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [timothy.callahan@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express


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waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Jung Kim


January 12, 1998


TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
GROUP 2500